



Holston Electric Cooperative

A Touchstone Energy® Cooperative





About Holston Electric Cooperative

- Not-for-profit
- Years In Operation - 76
- Member–Owners - 30,445
- 525 Square Mile Service Area
- Miles of Line - 2,000+
- Poles – 50,000+
- 12 Substations
- \$75 Million Operating Budget

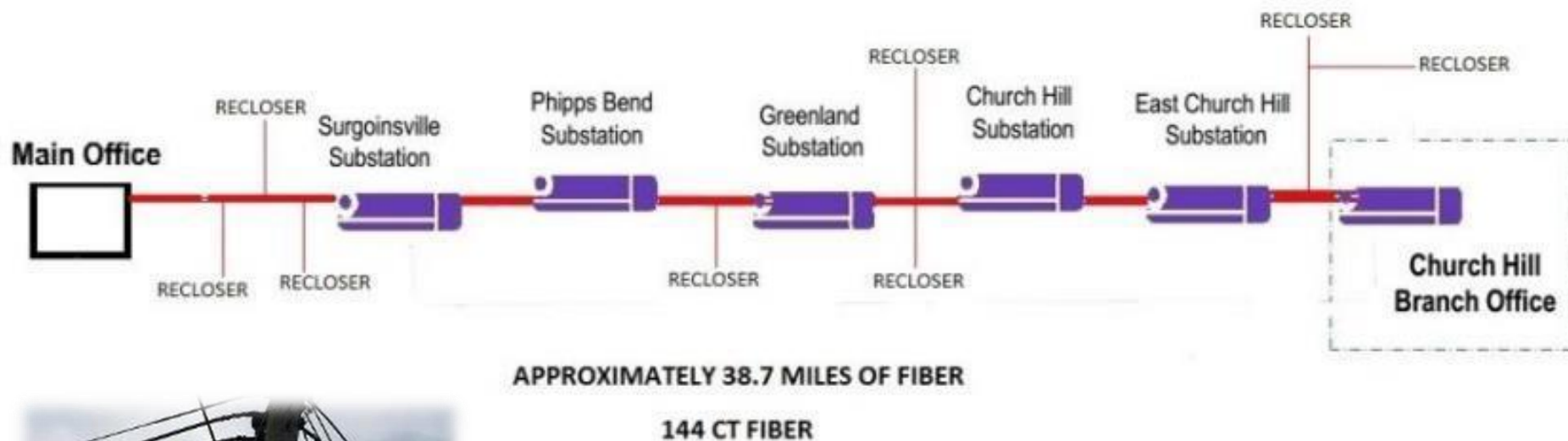


About HEC Members

- Estimated Population - 58,152
- Median Household Income - \$37,079
- Members 25+ years of age with High School Diploma – 81%
- A significant decrease for Bachelor's Degree – 12.6%
- More than 3,500 Companies
- About 50/50 commercial and residential members
- Member Density – 14 per mile

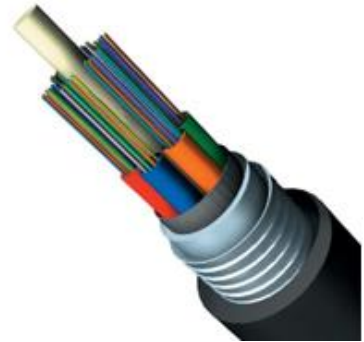
Holston and Broadband

HEC has fiber – about **40 miles** of it.



Holston and Broadband

We are completing **110 miles** of fiber backbone to connect HEC power lines and substations, creating a smart grid network that uses digital technology to detect and react to changes in electricity supply usage.





Holston and Broadband

Smart Grid improves our electric service.

- **Improves** operating **efficiencies**.
- **Manages** wholesale power **cost**.
- **Improves service** quality/response times to outages.
- **Leverages for other** fiber optic network **uses**.
 - **Continuous Advances** in technology/consumer demand.
 - **Smart devices and electricity** interworking grows daily.
 - Fiber optics would help HEC **endure these changes**.



Holston and Broadband

- **First stages** of developing **business plan** by studying:
 - Cost of construction
 - Electric system enhancements through Smart Grid

- Study includes a **Smart Grid pilot project**:
 - 20 miles of fiber to 700 members' homes

- Study could also:
 - Determine participation rate of members
 - Estimate likely revenues and expenses

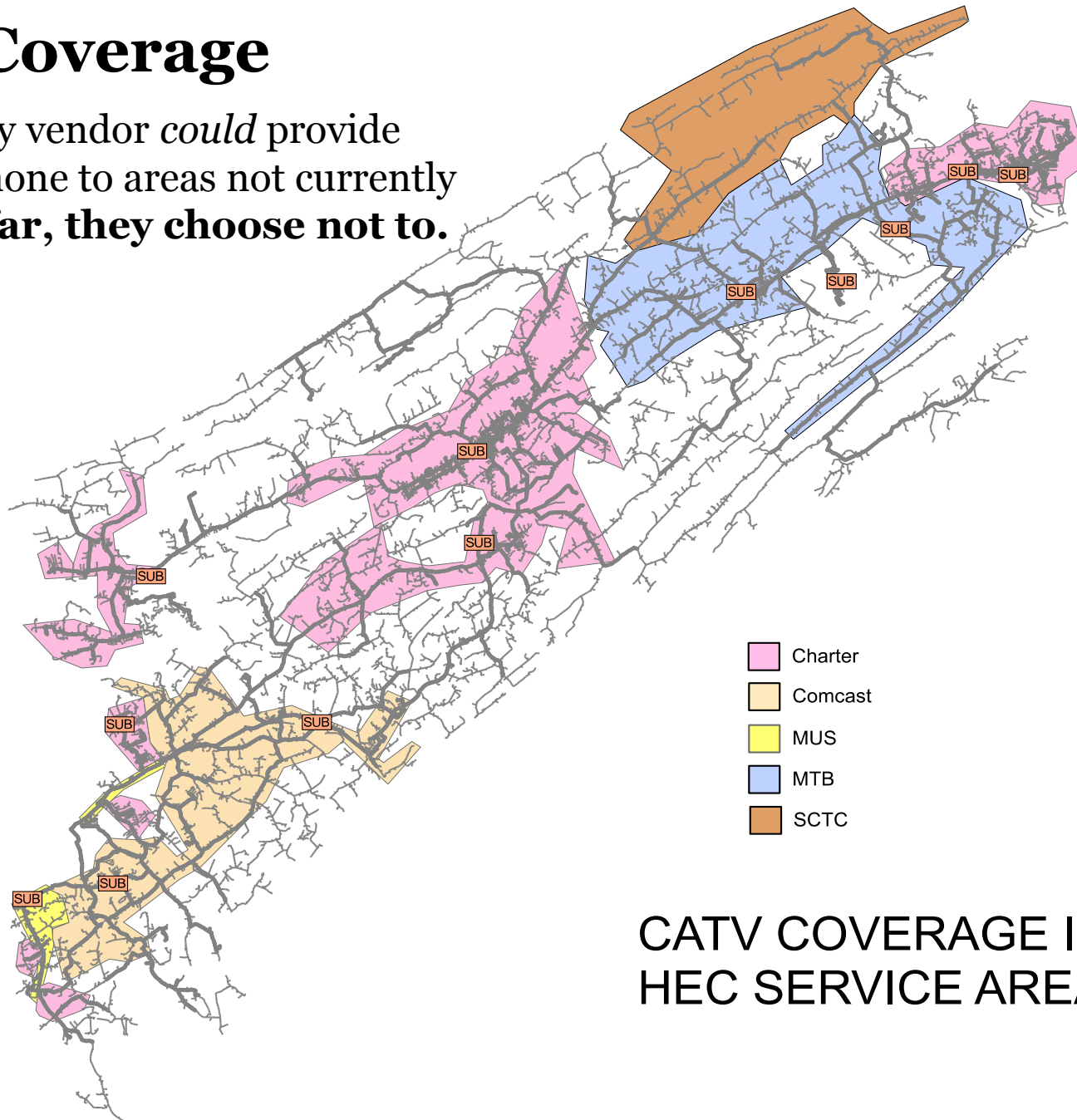


Broadband and the State of Tennessee

- **A bill introduced** by Gov. Bill Haslam passed April 2017 – the Tennessee Broadband Accessibility Act – **allows rural electric cooperatives to provide this service to members.**
- Passage of this bill **does not change the challenging economics** of building a broadband system.
- **Only \$30 million in grant allocations** made available over 3 years for public and private utilities, corporations and electric and telephone cooperatives to use to provide internet services.

Cable Coverage

A third-party vendor *could* provide cable/telephone to areas not currently served. **So far, they choose not to.**

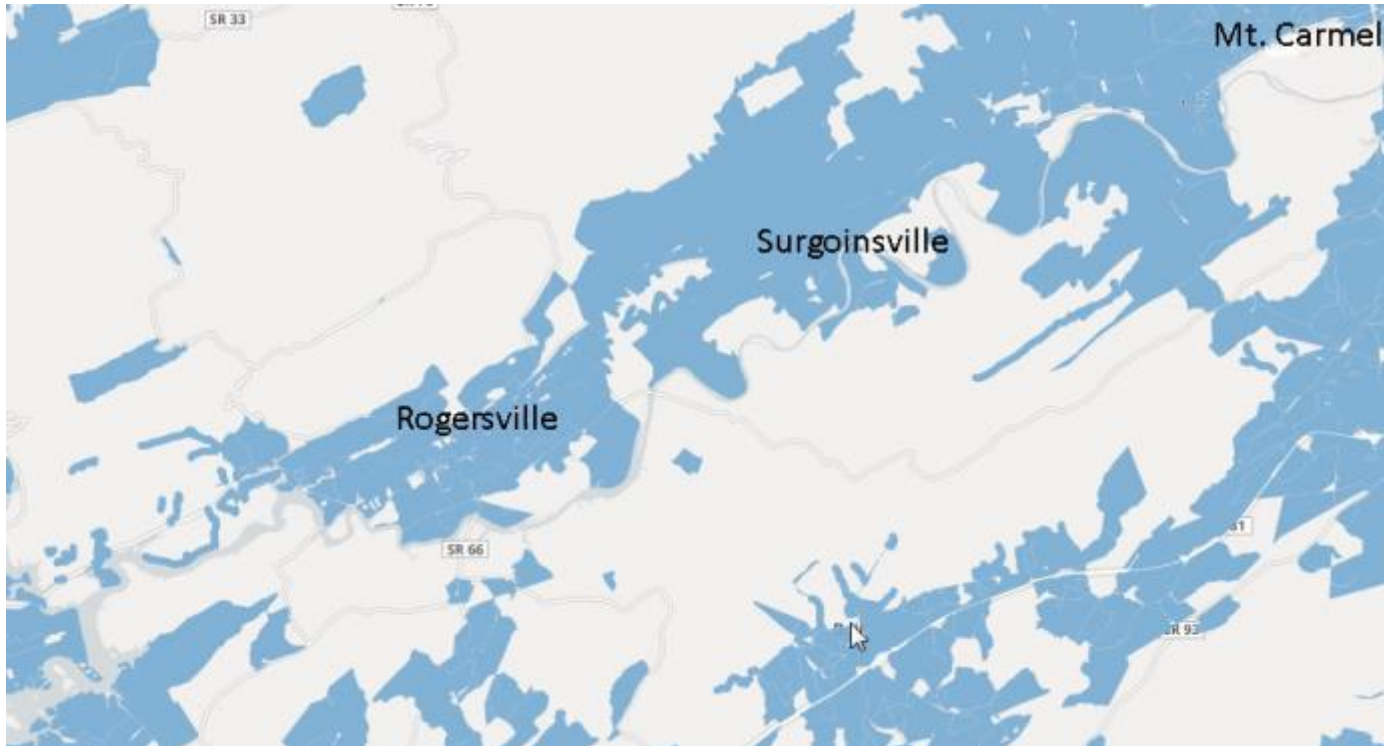


CATV COVERAGE IN
HEC SERVICE AREA

Broadband Availability Map

According to a 2016 HEC survey evaluating broadband service (about 5% responding):

38.5% members do not have access to broadband.



No availability in areas shown as white.



Economic Challenges

- **Average cost** of fiber to the home is **\$70,000 per mile.**
- **HEC's 1,700 miles = +/- \$120 million**
 - Smart Grid, 30% or \$36 million of the investment
 - Fiber to the home, 70% or \$84 million
- **TVA regulations** require that electric service revenues only be used to fund electric-related services (like Smart Grid).



Broadband and Our Members

*“If enough people care about something,
anything is possible.”*

Peter Ueberroth

- More than 2,000 members attended district meetings in support and hope of Holston Electric Cooperative providing broadband service.
- When surveyed, 95% responded that quality access to broadband was important to them and their family.



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